

**PRECISION INSERT FOR MOLDING MULTI-FIBER CONNECTORS
AND METHOD FOR MANUFACTURING THEREOF**

ABSTRACT OF THE DISCLOSURE

A guide block assembly for aligning and retaining fiber bore forming pins and guide pin bore forming pins in precise relation to each other during the molding of a multi-fiber ferrule includes a unitary member defining at least one fiber bore and at least one guide pin bore. Each fiber bore, and optionally each guide pin bore, is formed by creating a starter hole using a first electric discharge machining (EDM) wire and enlarging the starter hole using a second EDM wire. Each fiber bore has a length to diameter ratio of between approximately 3::1 to 10::1, more preferably between approximately 4::1 to 8::1, and most preferably approximately 6::1. The guide block assembly may further include a cavity behind the fiber bore and a front face that forms a non-rectilinear surface on the face of the ferrule. The unitary block assembly contains fewer parts and is less expensive to manufacture.